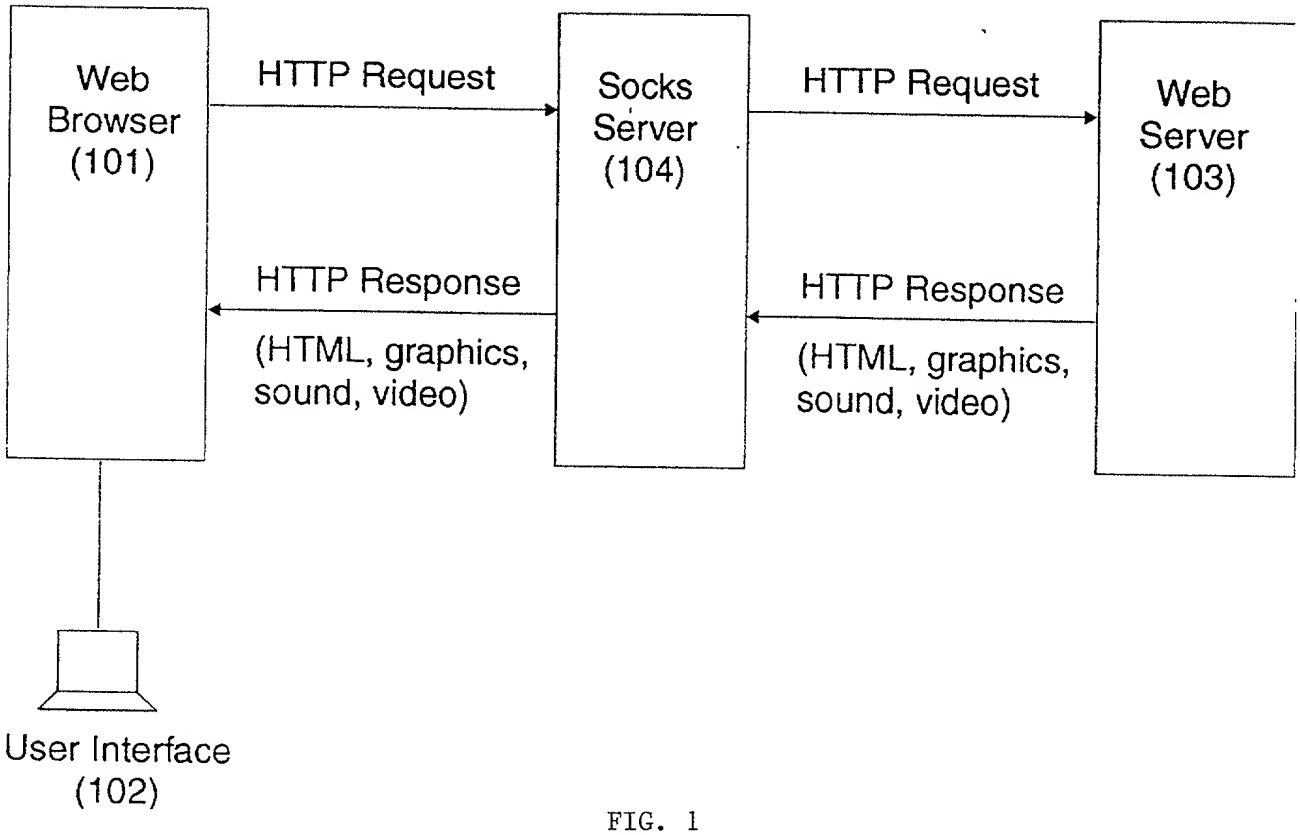
Web Browser (101)
HTTP Request
Socks Server (104)
HTTP Request
Web Server (103)
HTTP Response
(HTML, graphics, sound, video)
HTTP Response
(HTML, graphics, sound, video)
User Interface (102)

FIG. 1

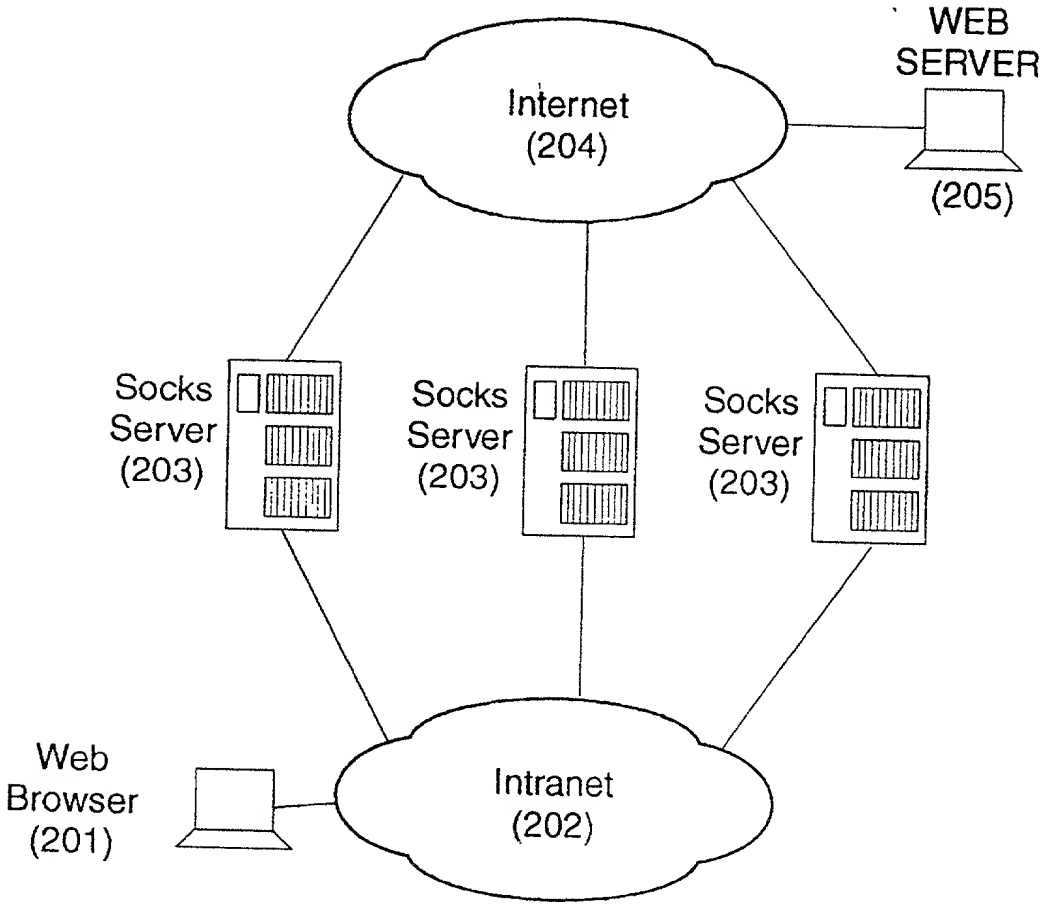
WEB
SERVER
Internet
(204)
(205)
Socks
Server
(203)
Socks
Server
(203)
Socks
Server
(203)
Web
Browser
(201)
Intranet
(202)

FIG. 2

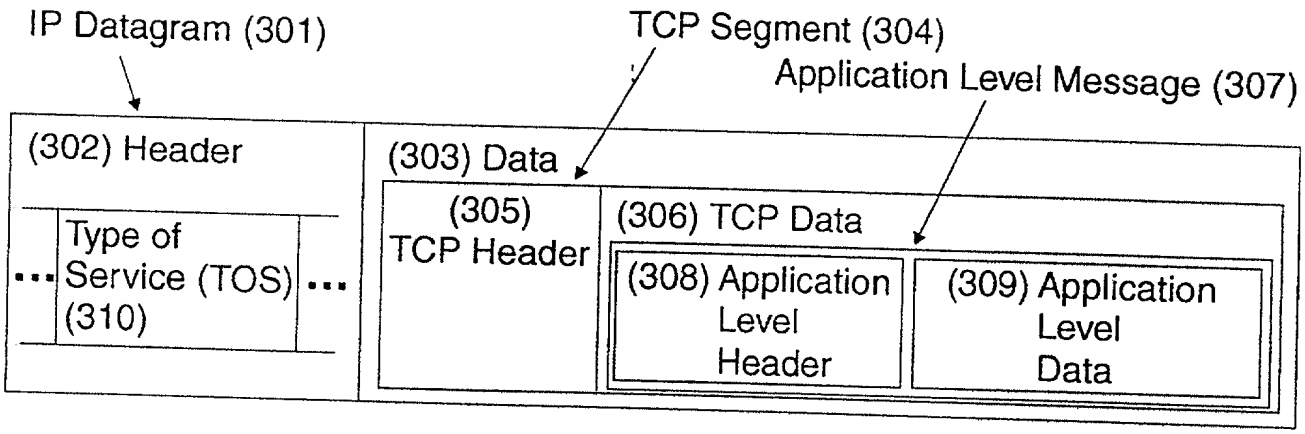
IP Datagram (301)
TCP Segment (304)
Application Level Message (307)
(302) Header
Type of Service (TOS) (310)
(303) Data
(305) TCP Header
(306) TCP Data
(308) Application Level Header
(309) Application Level Data

FIG. 3

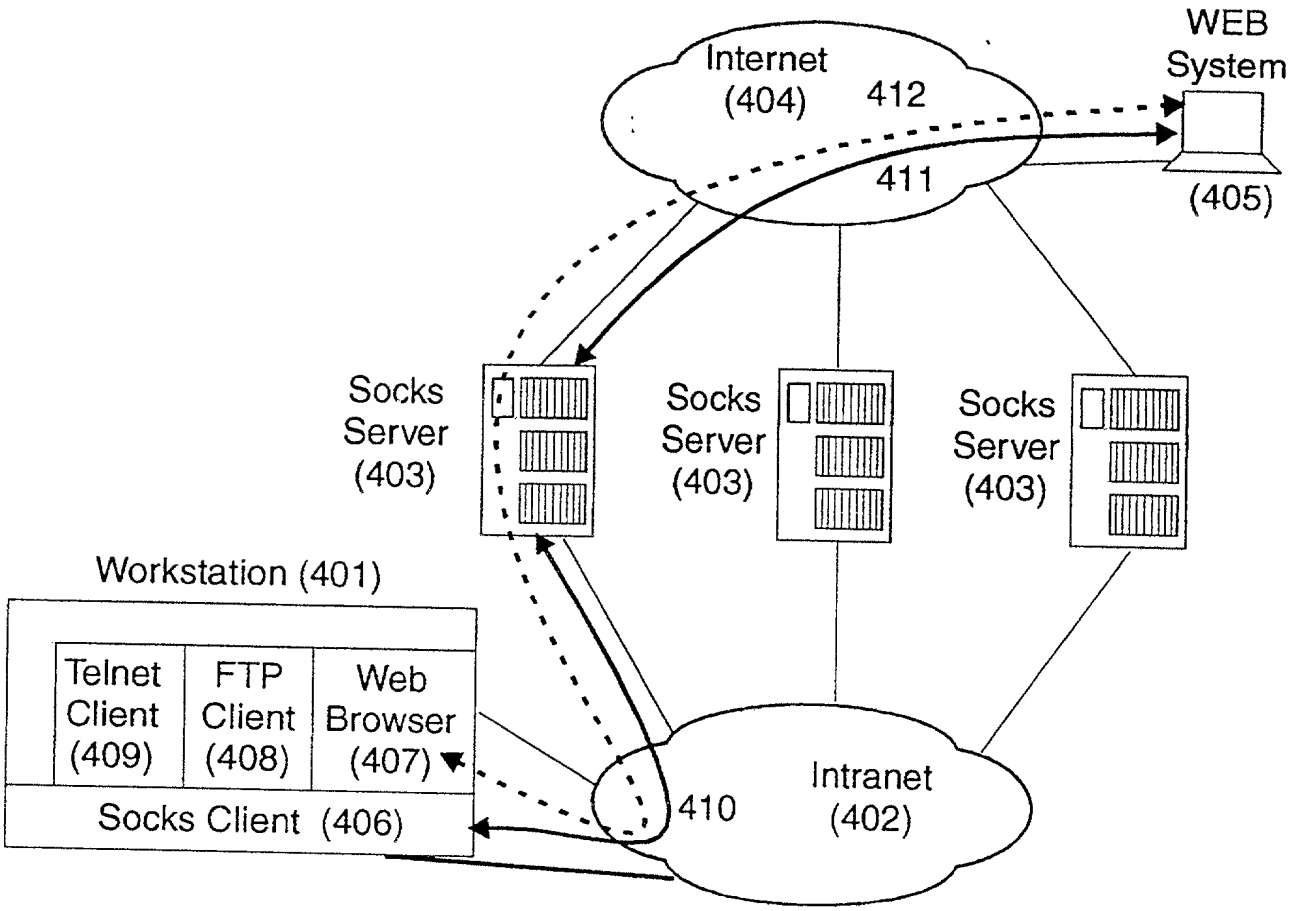
WEB
System
Internet
(404)
412
411
(405)
Socks
Server
(403)
Socks
Server
(403)
Socks
Server
(403)
Workstation (401)
Telnet
Client
(409)
FTP
Client
(408)
Web
Browser
(407)
Socks Client (406)
410
Intranet
(402)

FIG. 4

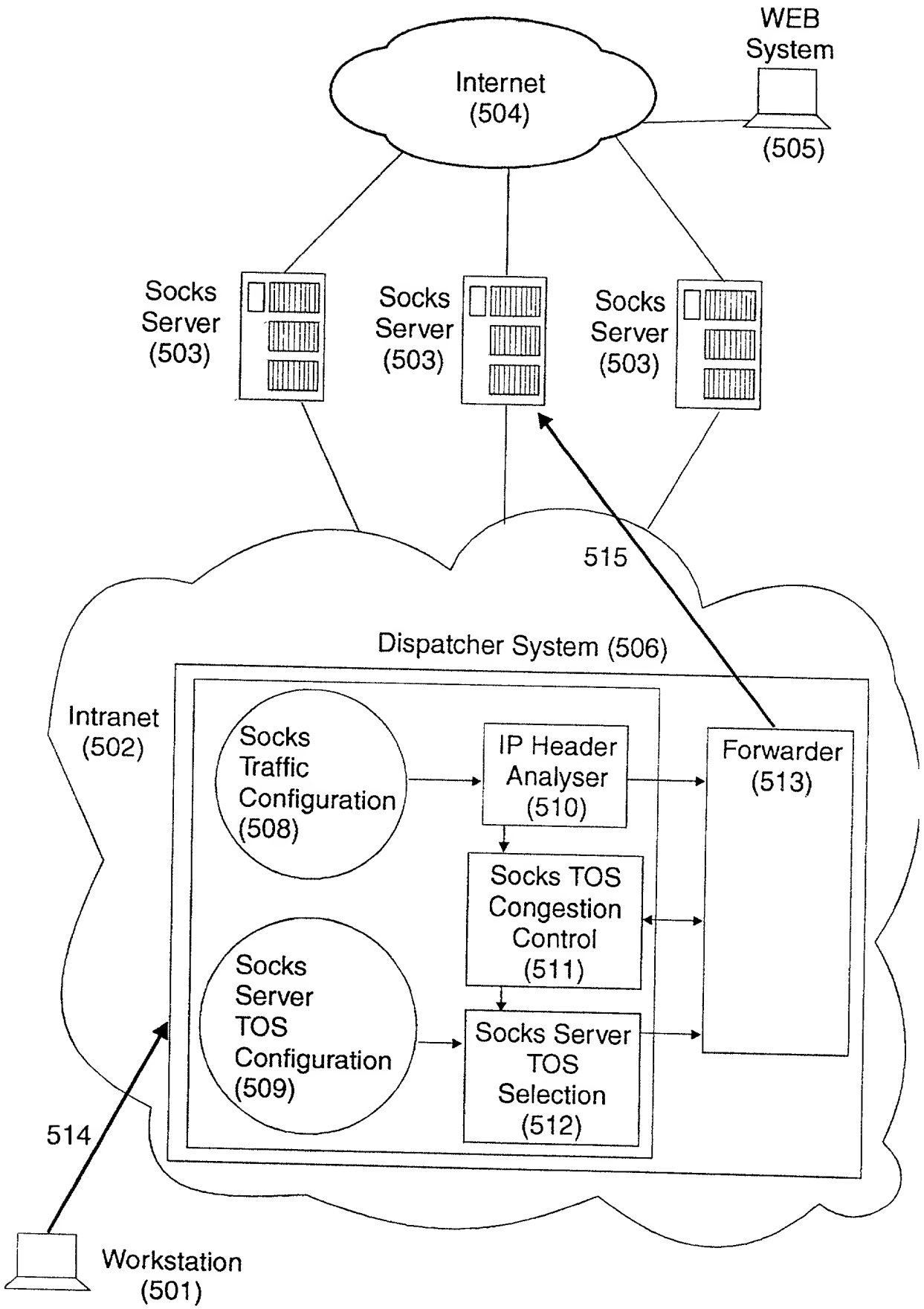
WEB
System
Internet
(504)
(505)
Socks
Server
(503)
Socks
Server
(503)
Socks
Server
(503)
515
Dispatcher System (506)
Intranet
(502)
Socks
Traffic
Configuration
(508)
IP Header
Analyser
(510)
Forwarder
(513)
Socks TOS
Congestion
Control
(511)
Socks
Server
TOS
Configuration
(509)
Socks Server
TOS
Selection
(512)
514
Workstation
(501)

FIG. 5

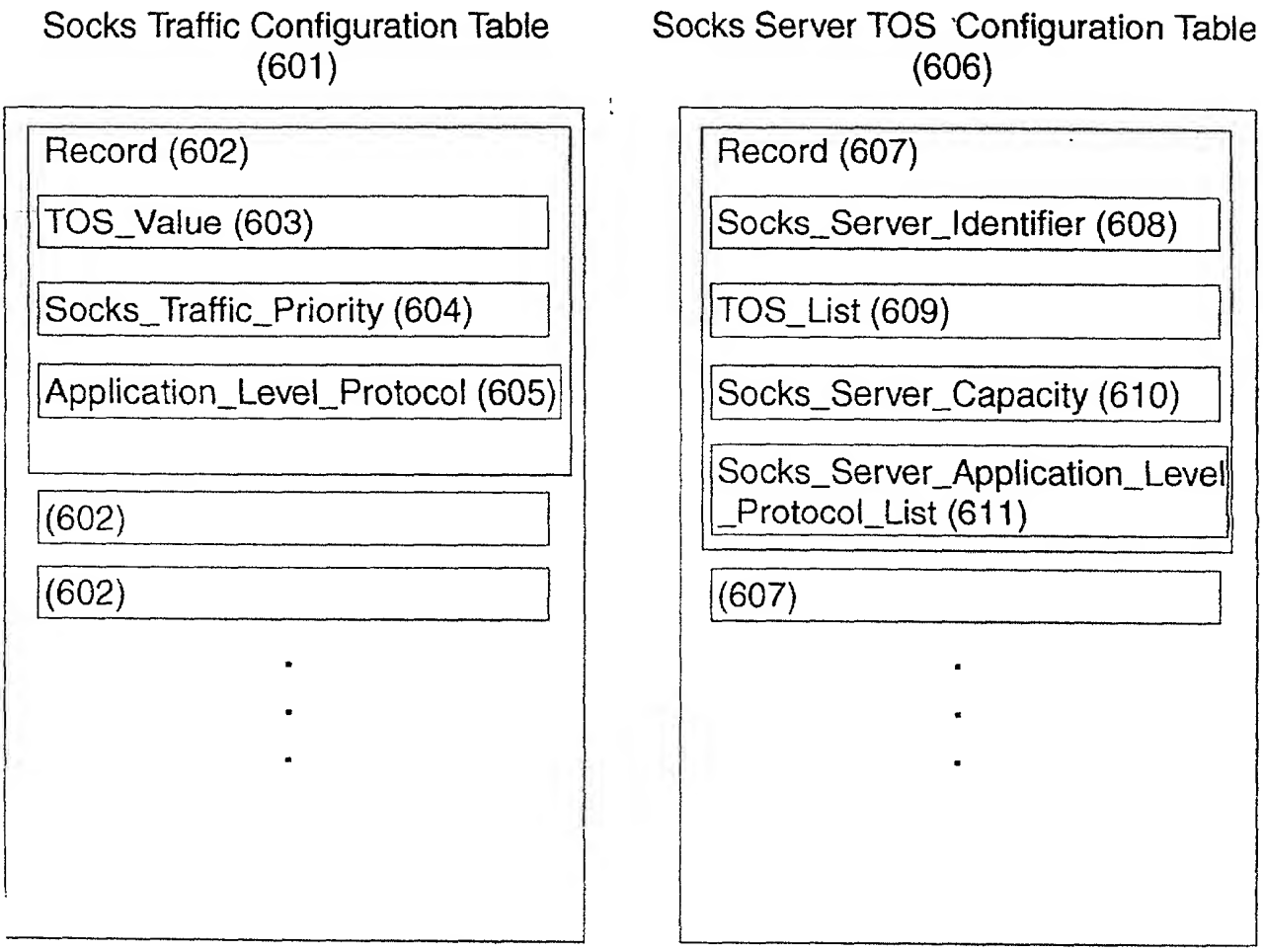
Socks Traffic Configuration Table
(601)
Record (602)
TOS_Value (603)
Socks_Traffic_Priority (604)
Application_Level_Protocol (605)
(602)
(602)
Socks Server TOS Configuration Table
(606)
Record (607)
Socks_Server_Identifier (608)
TOS_List (609)
Socks_Server_Capacity (610)
Socks_Server_Application_Level_Protocol_List (611)
(607)

FIG. 6

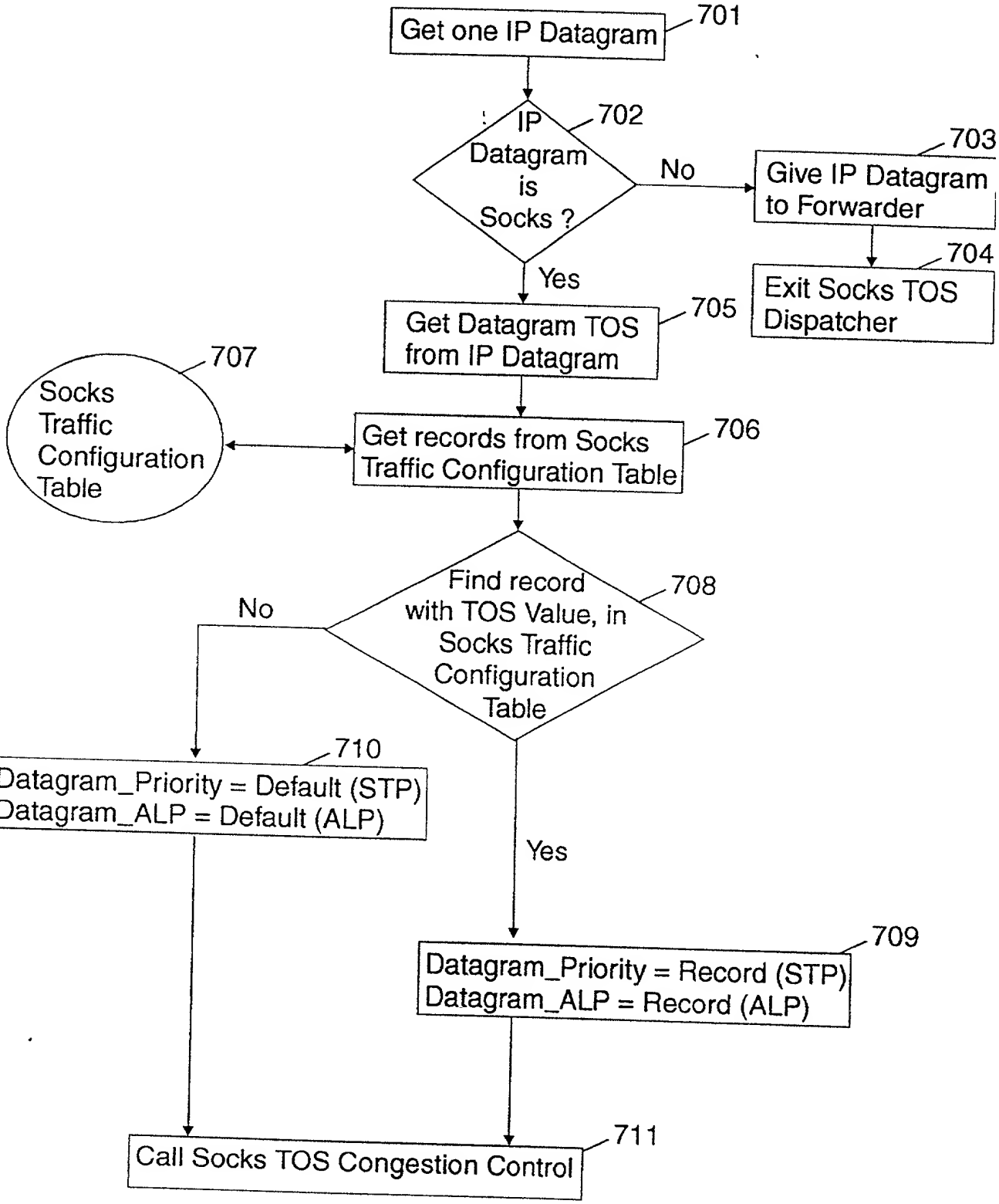
Get one IP Datagram
701
IP Datagram is Socks ?
702
No
Give IP Datagram to Forwarder
703
Exit Socks TOS Dispatcher
704
Yes
Get Datagram TOS from IP Datagram
705
Socks Traffic Configuration Table
707
Get records from Socks Traffic Configuration Table
706
Find record with TOS Value, in Socks Traffic Configuration Table
708
No
Yes
Datagram_Priority = Default (STP)
Datagram_ALP = Default (ALP)
710
Datagram_Priority = Record (STP)
Datagram_ALP = Record (ALP)
709
Call Socks TOS Congestion Control
711

FIG. 7

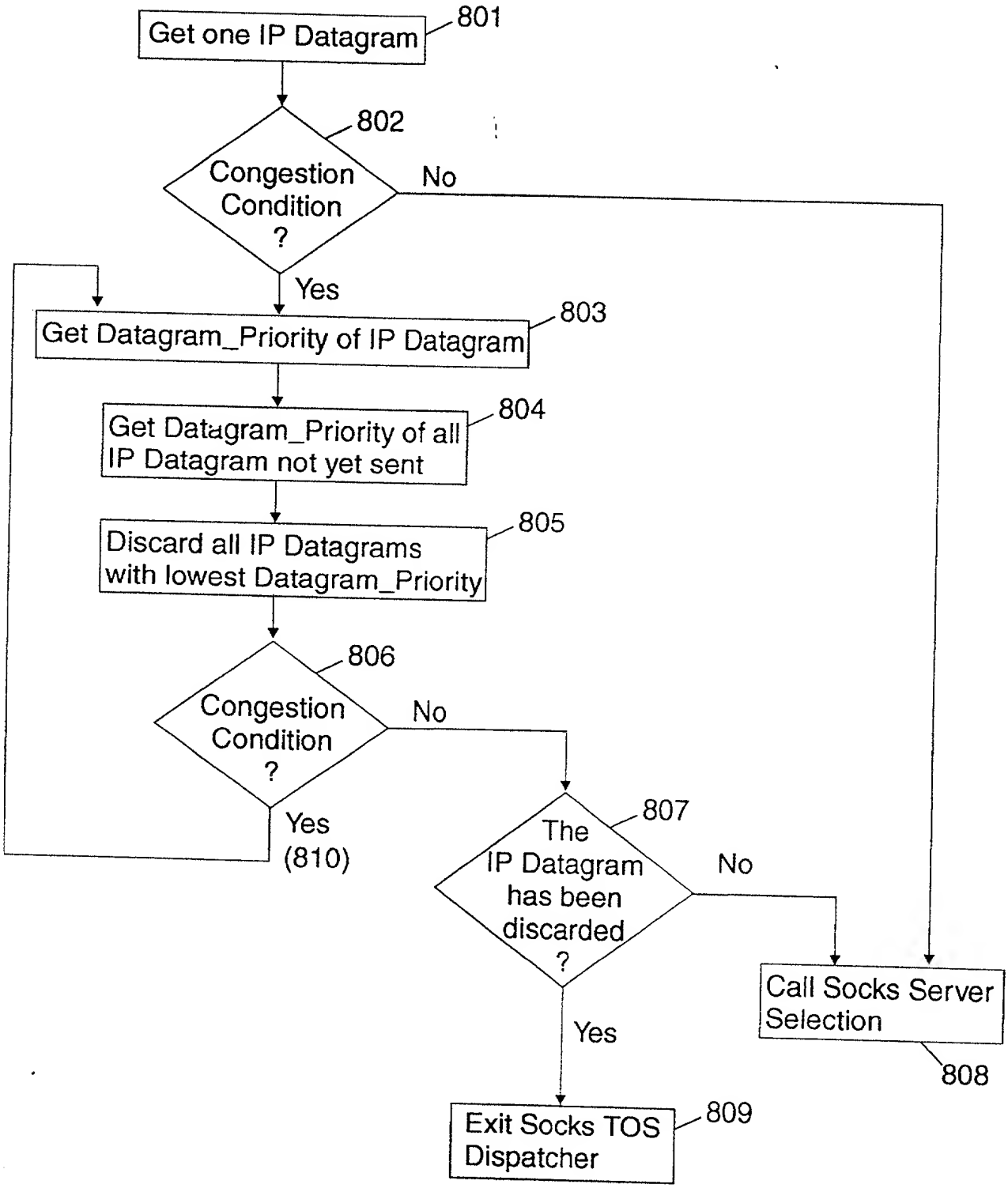
Get one IP Datagram
801
802
Congestion Condition ?
No
Yes
Get Datagram_Priority of IP Datagram
803
Get Datagram_Priority of all IP Datagram not yet sent
804
Discard all IP Datagrams with lowest Datagram_Priority
805
806
Congestion Condition ?
No
Yes (810)
807
The IP Datagram has been discarded ?
No
Yes
Call Socks Server Selection
808
Exit Socks TOS Dispatcher
809

FIG. 8

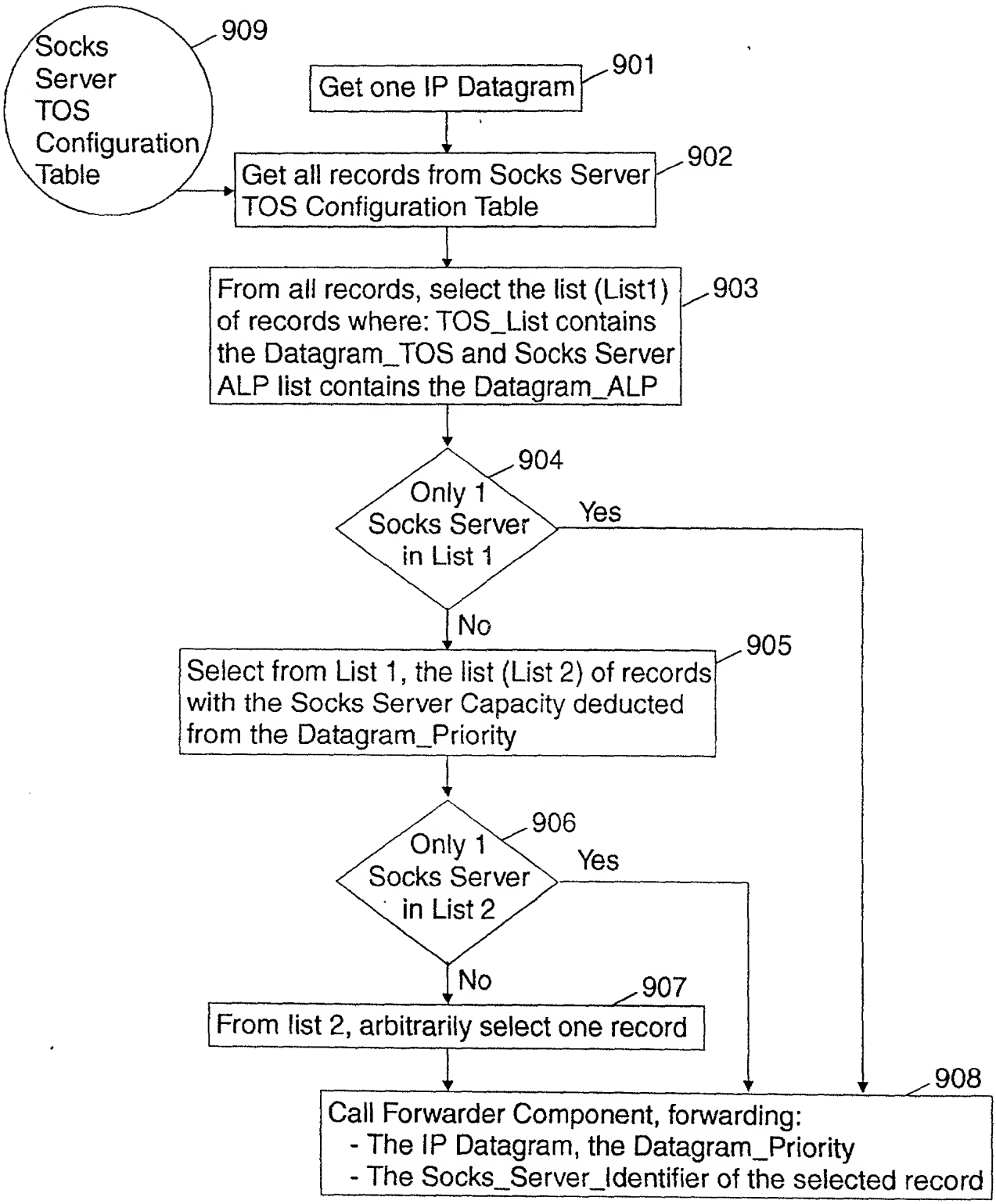
Socks Server TOS Configuration Table
909
Get one IP Datagram
901
Get all records from Socks Server TOS Configuration Table
902
From all records, select the list (List1) of records where: TOS_List contains the Datagram_TOS and Socks Server ALP list contains the Datagram_ALP
903
Only 1 Socks Server in List 1
904
Yes
No
Select from List 1, the list (List 2) of records with the Socks Server Capacity deducted from the Datagram_Priority
905
Only 1 Socks Server in List 2
906
Yes
No
From list 2, arbitrarily select one record
907
Call Forwarder Component, forwarding:
- The IP Datagram, the Datagram_Priority
- The Socks_Server_Identifier of the selected record
908

FIG. 9

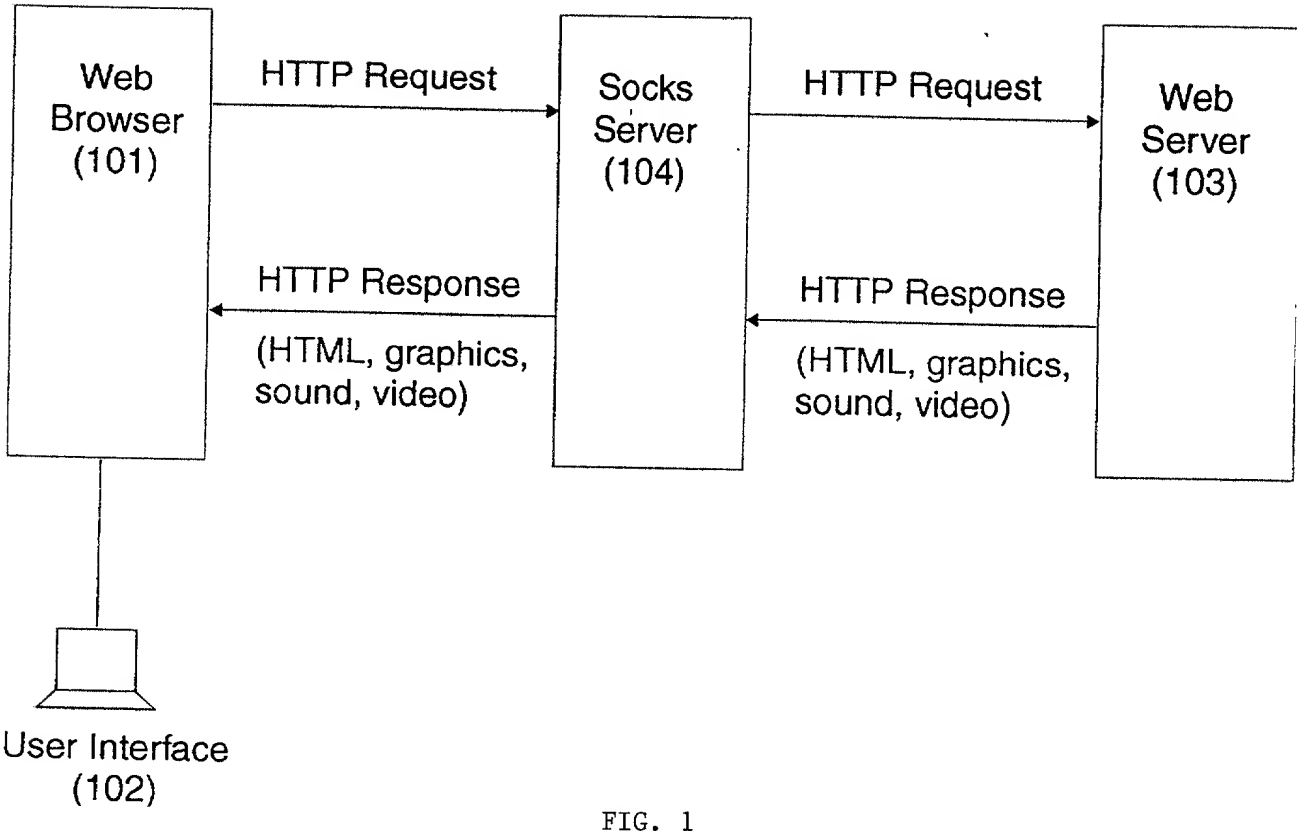
Web Browser (101)
HTTP Request
Socks Server (104)
HTTP Request
Web Server (103)
HTTP Response
(HTML, graphics, sound, video)
HTTP Response
(HTML, graphics, sound, video)
User Interface (102)

FIG. 1

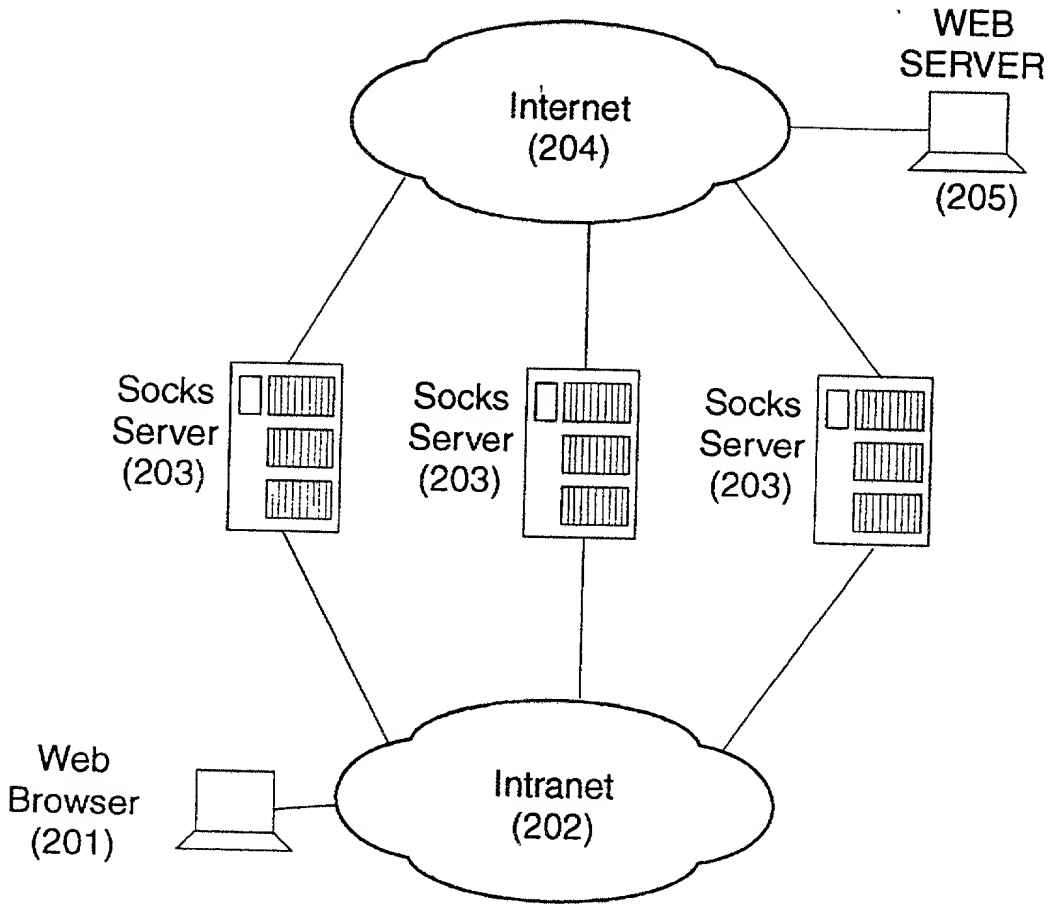
WEB
SERVER
Internet
(204)
(205)
Socks
Server
(203)
Socks
Server
(203)
Socks
Server
(203)
Web
Browser
(201)
Intranet
(202)

FIG. 2

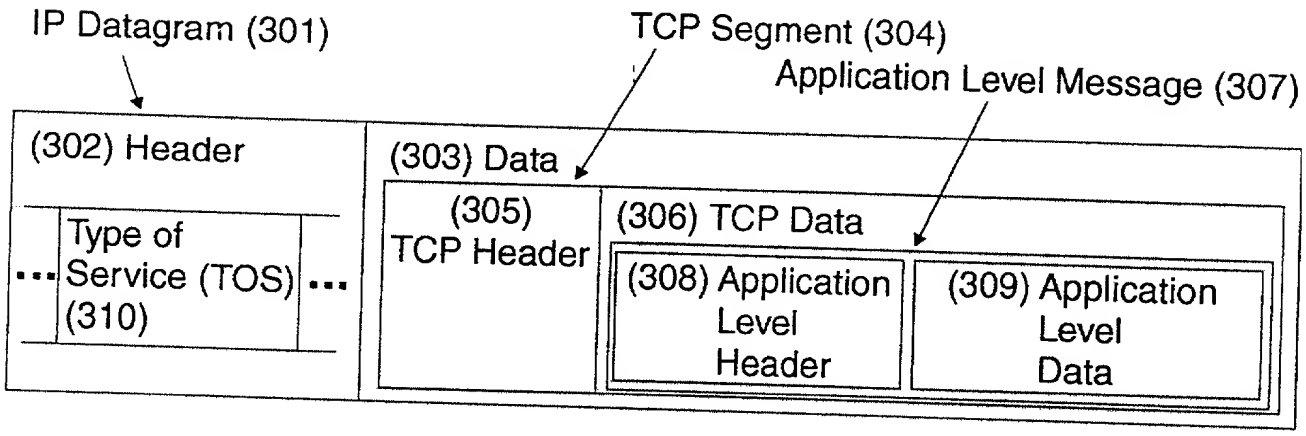
IP Datagram (301)
TCP Segment (304)
Application Level Message (307)
(302) Header
Type of Service (TOS) (310)
(303) Data
(305) TCP Header
(306) TCP Data
(308) Application Level Header
(309) Application Level Data

FIG. 3

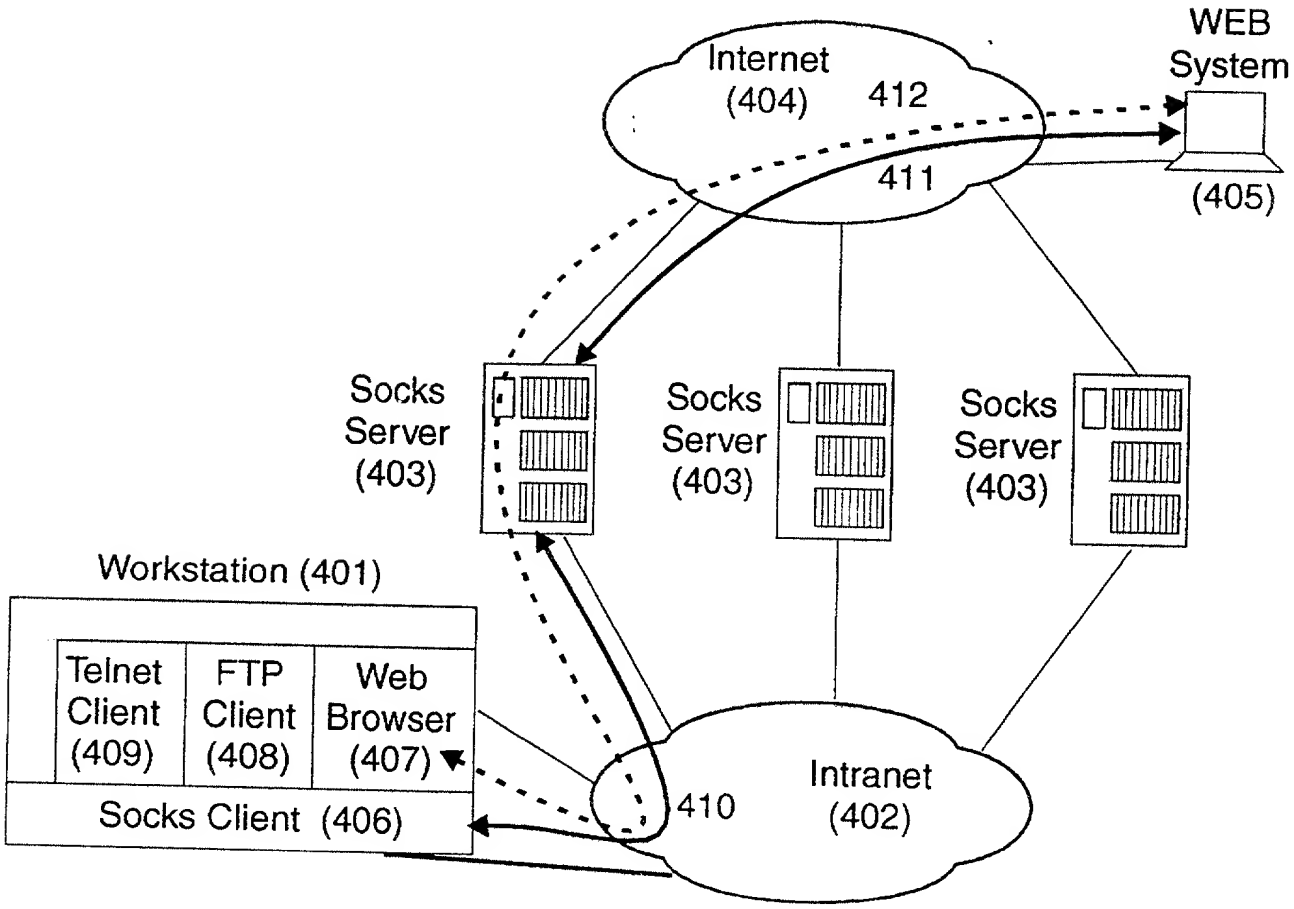
Internet
(404)
412
411
WEB
System
(405)
Socks
Server
(403)
Socks
Server
(403)
Socks
Server
(403)
Workstation (401)
Telnet
Client
(409)
FTP
Client
(408)
Web
Browser
(407)
Socks Client (406)
410
Intranet
(402)

FIG. 4

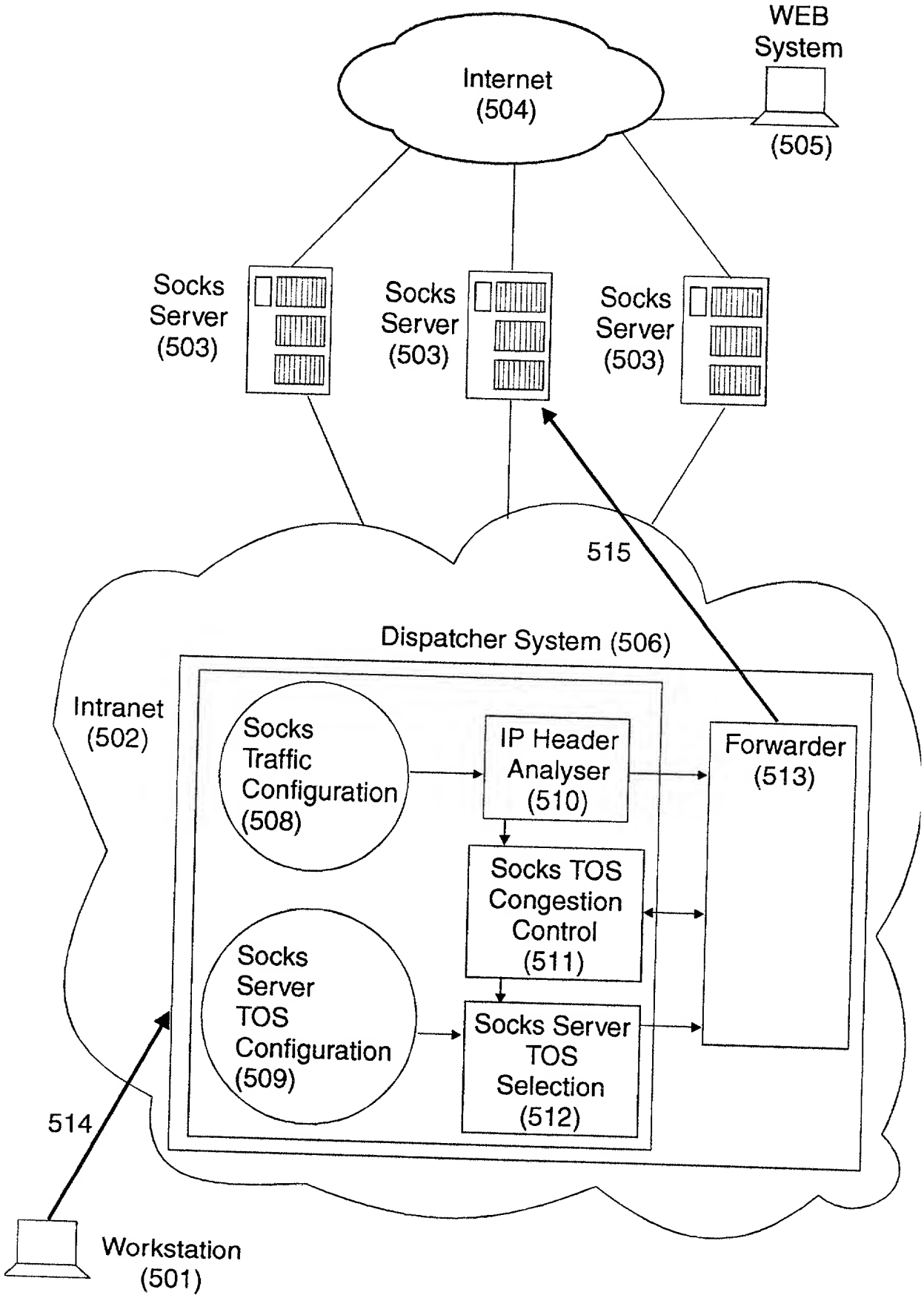
WEB
System
Internet
(504)
(505)
Socks
Server
(503)
Socks
Server
(503)
Socks
Server
(503)
515
Dispatcher System (506)
Intranet
(502)
Socks
Traffic
Configuration
(508)
IP Header
Analyser
(510)
Forwarder
(513)
Socks TOS
Congestion
Control
(511)
Socks
Server
TOS
Configuration
(509)
Socks Server
TOS
Selection
(512)
514
Workstation
(501)

FIG. 5

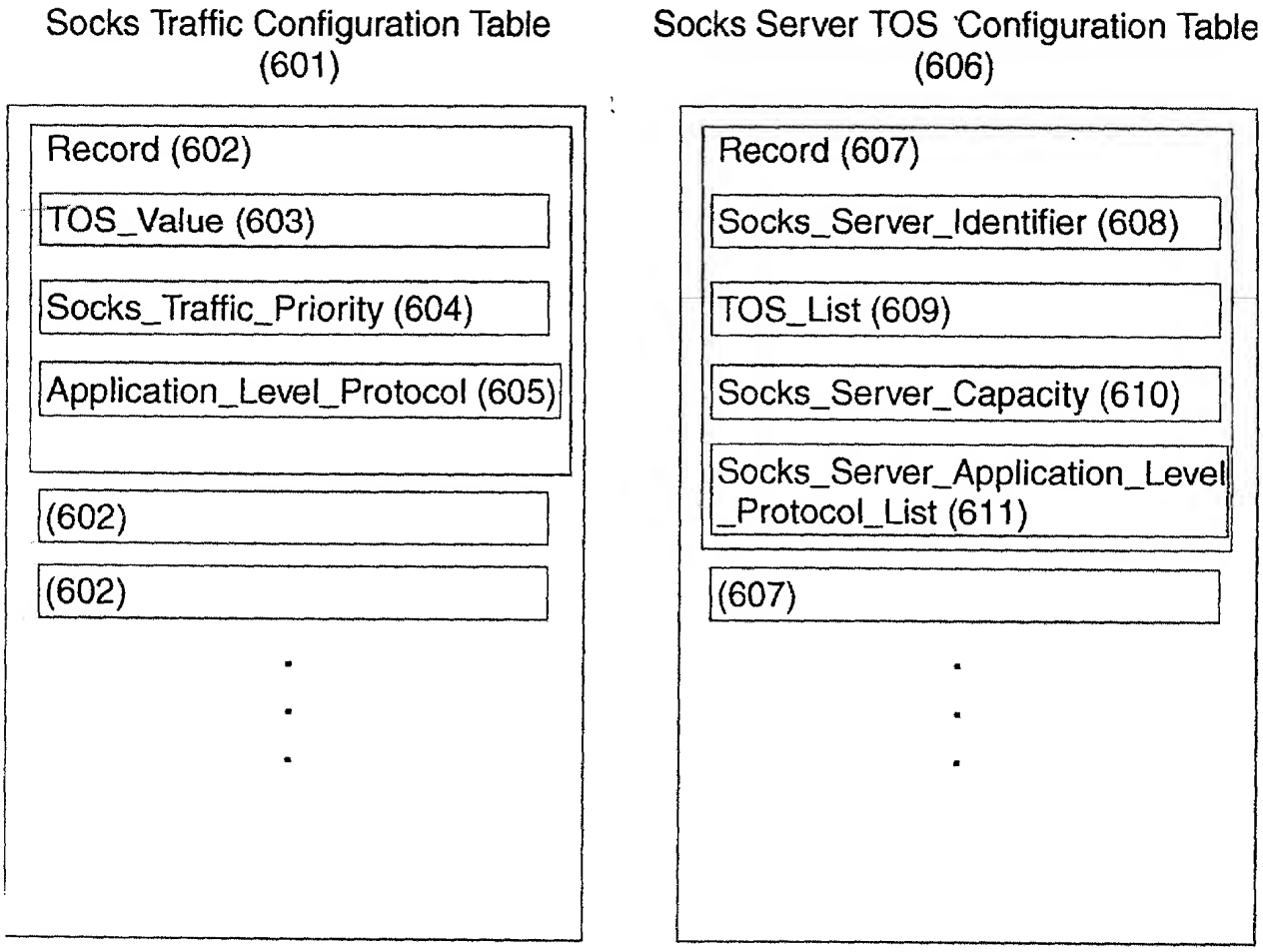
Socks Traffic Configuration Table
(601)
Record (602)
TOS_Value (603)
Socks_Traffic_Priority (604)
Application_Level_Protocol (605)
(602)
(602)
Socks Server TOS Configuration Table
(606)
Record (607)
Socks_Server_Identifier (608)
TOS_List (609)
Socks_Server_Capacity (610)
Socks_Server_Application_Level_Protocol_List (611)
(607)

FIG. 6

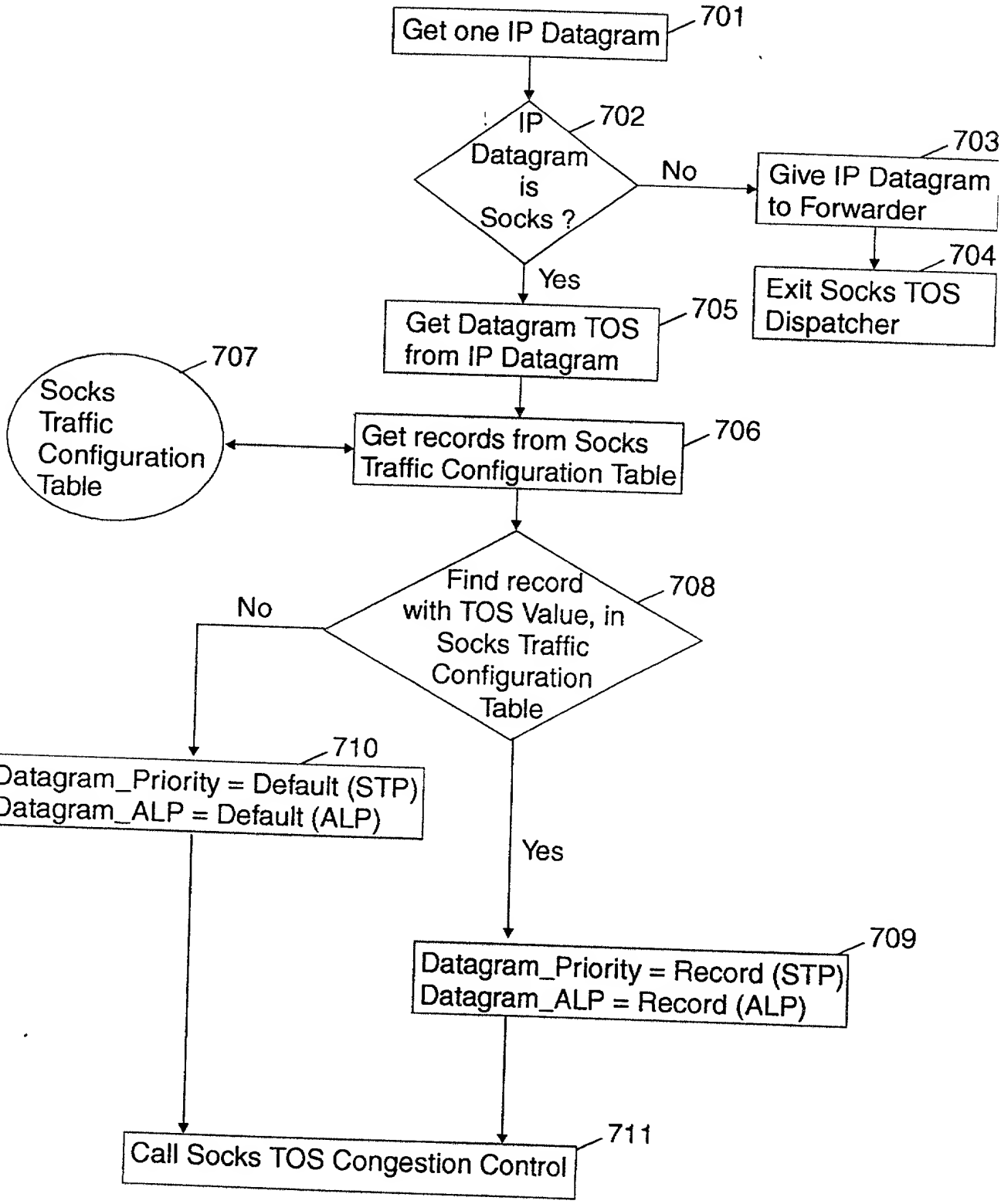
Get one IP Datagram
701
IP Datagram is Socks ?
702
No
703
Give IP Datagram to Forwarder
704
Exit Socks TOS Dispatcher
Yes
Get Datagram TOS from IP Datagram
705
707
Socks Traffic Configuration Table
Get records from Socks Traffic Configuration Table
706
Find record with TOS Value, in Socks Traffic Configuration Table
708
No
710
Datagram_Priority = Default (STP)
Datagram_ALP = Default (ALP)
Yes
709
Datagram_Priority = Record (STP)
Datagram_ALP = Record (ALP)
Call Socks TOS Congestion Control
711

FIG. 7

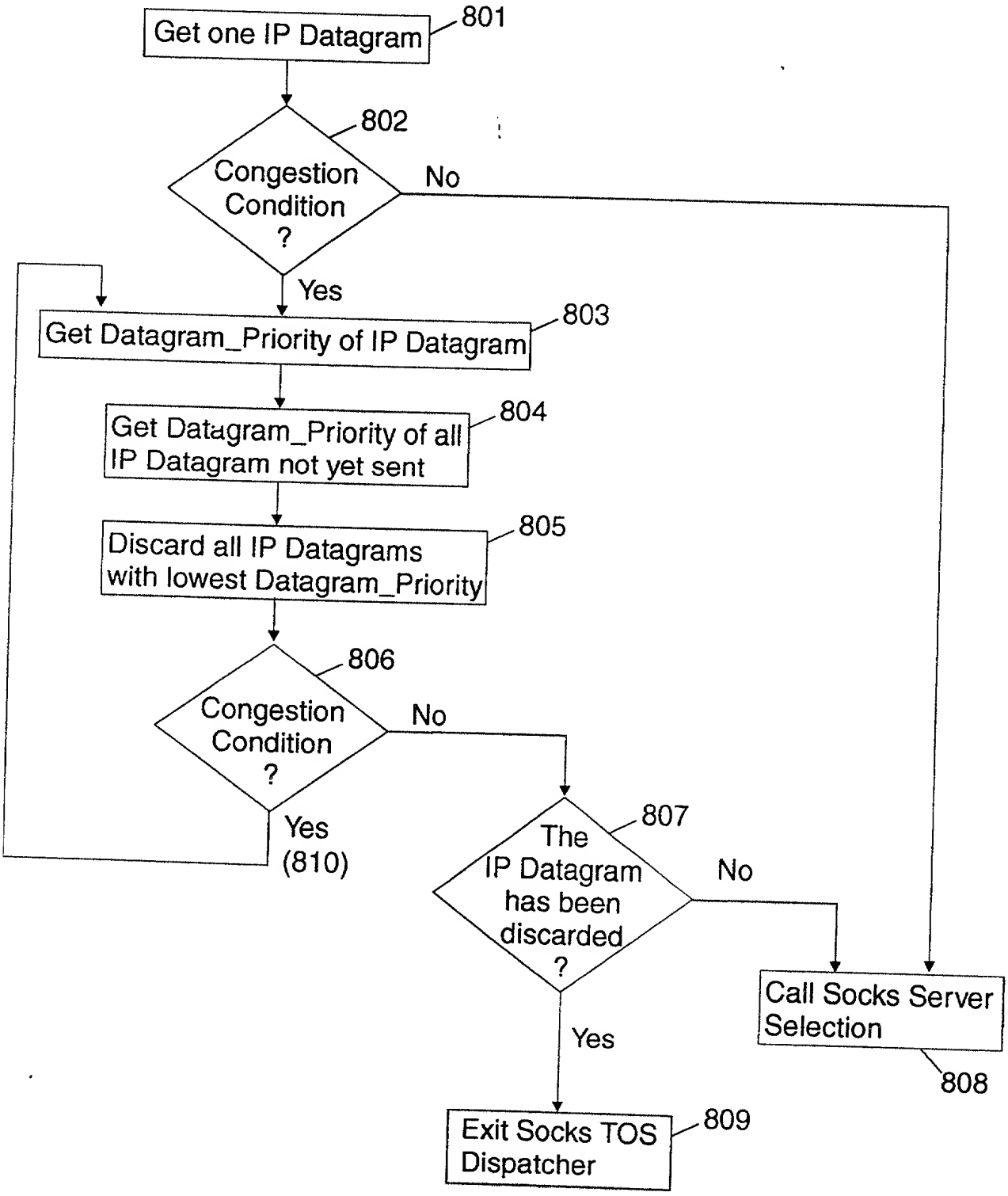
Get one IP Datagram
801
802
Congestion Condition ?
No
Yes
Get Datagram_Priority of IP Datagram
803
Get Datagram_Priority of all IP Datagram not yet sent
804
Discard all IP Datagrams with lowest Datagram_Priority
805
806
Congestion Condition ?
No
Yes (810)
807
The IP Datagram has been discarded ?
No
Yes
Call Socks Server Selection
808
Exit Socks TOS Dispatcher
809

FIG. 8

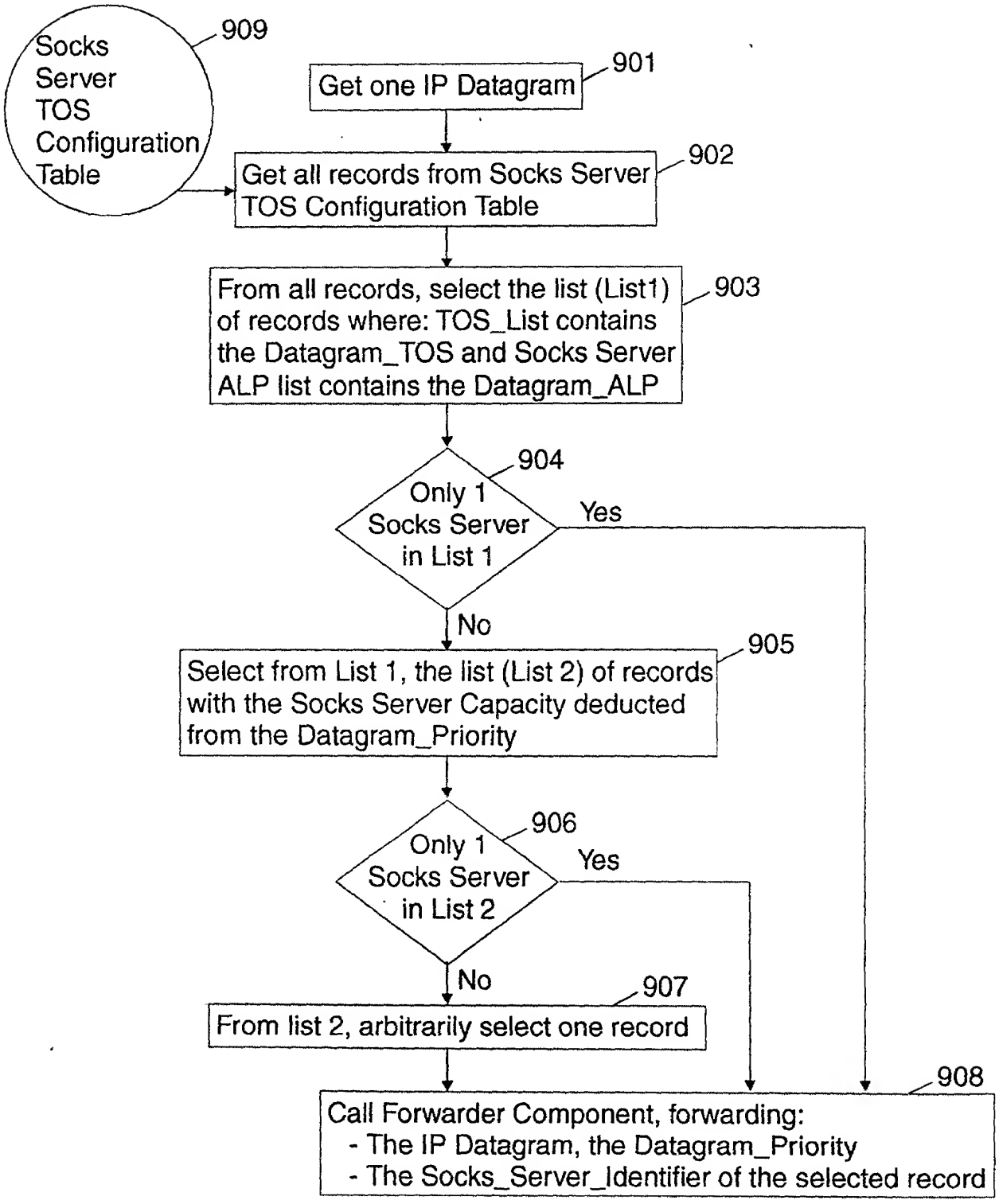
Socks Server TOS Configuration Table
909
Get one IP Datagram
901
Get all records from Socks Server TOS Configuration Table
902
From all records, select the list (List1) of records where: TOS_List contains the Datagram_TOS and Socks Server ALP list contains the Datagram_ALP
903
Only 1 Socks Server in List 1
904
Yes
No
Select from List 1, the list (List 2) of records with the Socks Server Capacity deducted from the Datagram_Priority
905
Only 1 Socks Server in List 2
906
Yes
No
From list 2, arbitrarily select one record
907
Call Forwarder Component, forwarding:
- The IP Datagram, the Datagram_Priority
- The Socks_Server_Identifier of the selected record
908

FIG. 9